In re: Roy F. Brabson et al. Application No.: 09/930,360

Filed: August 15,2001

Page 2

In The Claims:

1. (Currently Amended) A method of improving connectivity among topology subnets using a common connection network, comprising steps of:

determining, by a border node located at a border of a particular one of the topology subnets, one or more links between the border node and a neighboring border node located at the border of a different one of the topology subnets, wherein a first session endpoint resides in the particular one of the topology subnets and has connectivity to a global virtual routing node ("GVRN");

creating a list of the determined links;

determining, when a first session endpoint resides in the particular one of the topology subnets; whether that the first session endpoint has connectivity to the GVRN a global virtual routing node ("GVRN"), and adding link information to the created list to represent the determined this connectivity if so of the first session endpoint to the GVRN; and forwarding the created list to the neighboring border node.

2. (Currently Amended) The method according to Claim 1, further comprising the steps of: receiving, at the neighboring border node, the ereated list;

when a second session endpoint resides in the different one of the topology subnets, performing steps of:

determining whether the a second session endpoint, which resides in the different one of

Application No.: 09/930,360

Filed: August 15,2001

Page 3

the topology subnets, has connectivity to the GVRN or to another GVRN, and, when the second

session endpoint has connectivity to the GVRN or to another GVRN, adding link information to

the created list to represent this connectivity if so the determined connectivity; and

using the ereated list to select a data transmission path between the first session endpoint

and the second session endpoint; and

when the second session endpoint does not reside in the different one of the topology

subnets, performing steps of:

determining, by the neighboring border node, one or more links between the

neighboring border node and a different border node located at the border of another one of the

topology subnets; and

forwarding the created list to the different border node.

3. (Currently Amended) The method according to Claim 2, wherein the step of using the

ereated list to select a data transmission path further comprises the step of checking to see if both

the first session endpoint and the second session endpoint have connectivity to a single common

GVRN, and if so, when both the first session endpoint and the second session endpoint have

connectivity to a single GVRN, determining whether selecting the common GVRN as a node in

the data transmission path results in an optimal data transmission path.

(Original) A global virtual routing node ("GVRN") for interconnecting multiple 4.

topology subnets using a common connection network which extends beyond each of the

Application No.: 09/930,360

Filed: August 15,2001

Page 4

topology subnets, comprising:

connections which are defined from one or more nodes in the topology subnets to the GVRN;

means for representing the connections as links between physical nodes in the topology subnets; and

means for selectively analyzing the represented connections along with the links between physical nodes when selecting a data transmission path through the multiple topology subnets, wherein the data transmission path spans the common connection network if the connections to the GVRN are selected.

(Currently Amended) A system for improving connectivity among topology subnets using a common connection network, comprising:

means for determining, by a border node located at a border of a particular one of the topology subnets, one or more links between the border node and a neighboring border node located at the border of a different one of the topology subnets, wherein a first session endpoint resides in the particular one of the topology subnets and has connectivity to a global virtual routing node ("GVRN");

means for creating a list of the determined links;

means for determining, when a first session endpoint resides in the particular one of the topology subnets, whether that the first session endpoint has connectivity to the GVRN a global virtual routing node ("GVRN"), and adding link information to the ereated list to represent the

In re: Roy F. Brabson et al. Application No.: 09/930,360

Filed: August 15,2001

Page 5

determined this connectivity if so of the first session endpoint to the GVRN; and means for forwarding the ereated list to the neighboring border node.

6. (Currently Amended) The system according to Claim 5, further comprising: means for receiving, at the neighboring border node, the ereated list; when a second session endpoint resides in the different one of the topology subnets, means for:

means for determining whether the <u>a</u> second session endpoint, <u>which resides in the</u>

different one of the topology subnets, has connectivity to the GVRN or to another GVRN, and,
when the second session endpoint has connectivity to the GVRN or to another GVRN, adding
link information to the ereated list to represent this connectivity if so the determined
connectivity; and

means for using the ereated list to select a data transmission path between the first session endpoint and the second session endpoint; and

when the second session endpoint does not reside in the different one of the topology subnets, means for:

determining, by the neighboring border node, one or more links between the neighboring border node and a different border node located at the border of another one of the topology subnets; and

forwarding the created list-to-the different-border node.

Application No.: 09/930,360

Filed: August 15,2001

Page 6

7. (Currently Amended) The system according to Claim 6, wherein the means for using the

ereated list to select a data transmission path further comprises means for checking to see if both

the first session endpoint and the second session endpoint have connectivity to a single common

GVRN, and if so, when both the first session endpoint and the second session endpoint have

connectivity to a single GVRN, determining whether selecting the common GVRN as a node in

the data transmission path results in an optimal data transmission path.

8. (Currently Amended) A computer program product for improving connectivity among

topology subnets using a common connection network, the computer program product embodied

on one or more computer readable media and comprising:

computer readable program code means for determining that is configured to determine,

by a border node located at a border of a particular one of the topology subnets, one or more

links between the border node and a neighboring border node located at the border of a different

one of the topology subnets, wherein a first session endpoint resides in the particular one of the

topology subnets and has connectivity to a global virtual routing node ("GVRN");

computer readable program code means for creating that is configured to create a list of

the determined links;

computer readable program code means for determining, when a first session endpoint

resides in the particular one of the topology subnets, whether that is configured to determine that

the first session endpoint has connectivity to the GVRN a global virtual routing node

("GVRN"), and to add adding link information to the ereated list to represent the determined

Application No.: 09/930,360

Filed: August 15,2001

Page 7

this connectivity if so of the first session endpoint to the GVRN; and

computer readable program code means for forwarding that is configured to forward the

created list to the neighboring border node.

9. (Currently Amended) The computer program product according to Claim 8, further

comprising:

computer readable program code means for receiving that is configured to receive, at the

neighboring border node, the created list;

when a second session endpoint resides in the different one of the topology subnets;

computer readable program code means for:

determining that is configured to determine whether the a second session

endpoint, which resides in the different one of the topology subnets, has connectivity to the

GVRN or to another GVRN, and, when the second session endpoint has connectivity to the

GVRN or to another GVRN, to add adding link information to the created list to represent this

connectivity if so the determined connectivity; and

computer readable program code that is configured to use the using the created

list to select a data transmission path between the first session endpoint and the second session

endpoint; and

when the second session endpoint does not reside in the different one of the topology

subnets, computer readable program code means for:

determining, by the neighboring-border node, one or more links between the

In re: Roy F. Brabson et al. Application No.: 09/930,360

Filed: August 15,2001

Page 8

neighboring border node and a different border node located at the border of another one of the topology subnets; and

forwarding the created list to the different border node.

10. (Currently Amended) The computer program product according to Claim 9, wherein the computer readable program code that is configured to use the means for using the created list to select a data transmission path further comprises computer readable program code means for ehecking that is configured to check to see if both the first session endpoint and the second session endpoint have connectivity to a single common GVRN, and if so, when both the first session endpoint and the second session endpoint have connectivity to a single GVRN, that is configured to determine determining whether selecting the common GVRN as a node in the data transmission path results in an optimal data transmission path.